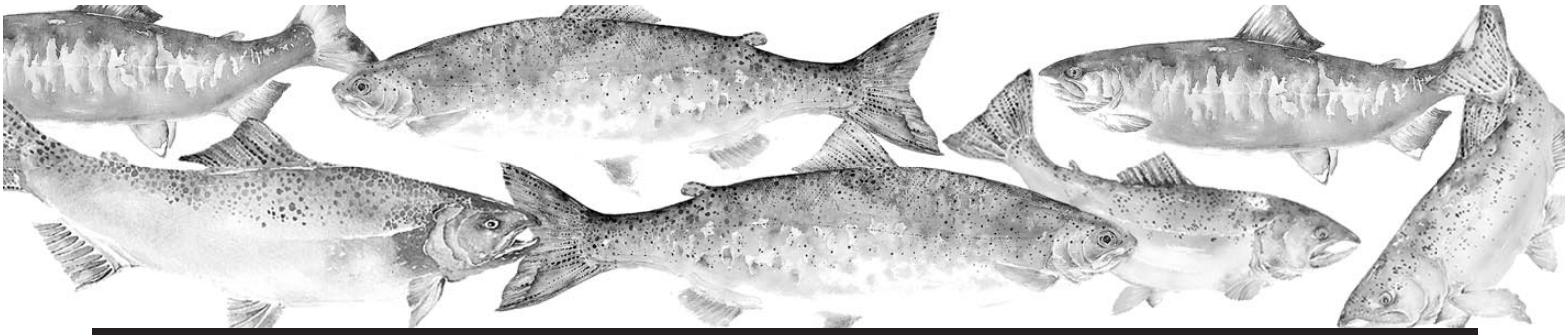
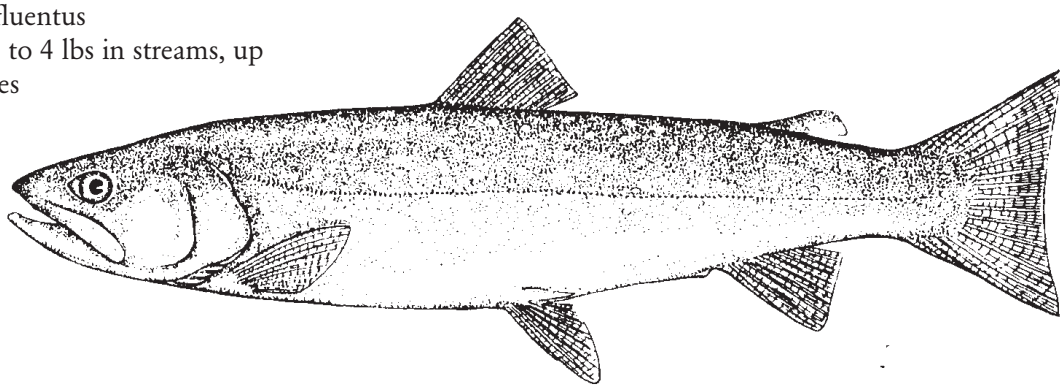


Clark County, Washington **Endangered Species Act** *Information*

Bull Trout

Salvelinus confluentus
Average size: up to 4 lbs in streams, up to 20 lbs in lakes
Fall spawner



In June 1998, the U.S. Fish and Wildlife Service listed Columbia River bull trout as threatened under the Endangered Species Act. Because these fish are known to inhabit some local rivers and streams, Clark County must take measures to protect bull trout.

What are bull trout?

The bull trout received its name from its large head and mouth. It is also distinguished from other salmonids by its predatory nature. Its diet as an adult consists largely of other fish.

Bull trout are members of the salmon family known as char. Char are distributed farther north than any other group of freshwater fish except Alaskan blackfish and are well adapted for life in very cold water. Bull trout, like other char, exhibit differences in body characteristics and life history behavior across their range. They can grow to more than 20 pounds in lake environments where food supplies are plentiful.

Char are distinguished from other salmonids by the absence of teeth in the roof of the mouth, presence of light colored spots on a dark background, absence of spots on the dorsal fin, small scales, and differences in the structure of their skeleton.

Bull trout and Dolly Varden were once considered the same species, but in 1978 biologists determined bull trout is a separate species. Of the two species, bull trout are larger and primarily an inland species, while Dolly Varden are generally smaller and distributed primarily in coastal areas.

Bull trout are native to the Pacific Northwest and historically occurred throughout the Columbia River Basin and in areas of western Montana, northern Nevada, northern California, and north to Alberta and British Columbia. Although the species was once abundant and widespread, bull trout now exist primarily in upper tributary streams and several lake and reservoir systems.

Small bull trout eat terrestrial and aquatic insects but shift to preying primarily on other fish as they grow larger. Large bull trout primarily eat small fish but have been known to eat frogs, snakes, mice, and ducklings. Bull trout evolved with whitefish, sculpins, and other trout and use all of them as food sources.

Life history

Bull trout reach sexual maturity at between four and seven years of age and can live as long as 12 years. They spawn in the fall after temperatures drop below 48 degrees Fahrenheit, in streams with abundant cold, unpolluted water, clean gravel and cobble substrate, and gentle stream slopes. Bull trout eggs require a long incubation period compared to other salmon and trout, hatching in late winter or early spring. Fry may remain in the stream bed for up to three weeks before emerging. Juvenile fish often remain at or near the stream bottom.

Some bull trout may live near areas where they were spawned. Others migrate from small streams to larger streams and rivers, or from streams to lakes, reservoirs, or salt water. Smaller resident fish remain near the areas where they were spawned while larger, migratory fish will move considerable distances to

spawn when habitat conditions allow.

Why are healthy runs of wild salmonids declining?

As Clark County's human population has boomed, its fish population has plummeted. The relatively high numbers of returning salmon in 2000, while encouraging, should not be misinterpreted as a sign that everything is fine. Fish populations in our region have always fluctuated, but the overall trend continues downward. While natural phenomena such as flooding, predators, and ocean currents affect salmon populations, human activity poses by far the greatest threat to salmon survival. The effects of human activity on fish populations have been many decades in the making and will take many decades to remedy. The four main areas of human activity that threaten salmon are known as the four Hs:

- **HARVEST:** Commercial and sports fishing directly reduce fish populations.
- **HATCHERIES:** Artificial production facilities produce domesticated fish that threaten the ability of wild fish to survive when they interbreed with the wild fish.
- **HYDROPOWER:** Dams block salmon migration up and down rivers and inundate fish habitat.
- **HABITAT:** Streams, rivers, estuaries, marine waters, and surrounding flood plains are being steadily degraded by human activities that increase soil erosion, reduce the amount of woody debris in streams, raise the water temperature, add contaminants to the water, decrease water flow, and create barriers to fish passage. Diminishing habitat and loss of habitat complexity increases vulnerability to predators.

For information about salmon recovery in Clark County, contact the Clark County Endangered Species Program at (360)397-2022 or www.saveoursalmon.com.

CLARK COUNTY WASHINGTON

good for FISH good for US